

**CITY OF KIRKLAND****Department of Public Works****123 Fifth Avenue, Kirkland, WA 98033 425.587.3800****www.kirklandwa.gov**

MEMORANDUM

To: City Council

From: Transportation Commission

Date: Draft

Subject: Level of Service/Concurrency/Project selection

DRAFT

Over 10 years ago, the Transportation Commission was formed to grapple with the questions of concurrency and level of service. Although there have been periods where these questions have been considered answered, there has always been a feeling that a better approach was desirable.

Most recently, three work items arose from the Transportation Conversations document that was presented to Council in June of 2010:

1. Review and revise concurrency system
2. Develop new level of service standards that align with transportation principles (what are those principles)
3. Develop clear goals and prioritization systems for project categories

The Transportation Commission has agreed to a fairly clear plan of action for items 1 and 2. For item 3, we know what the missing pieces are, but filling in those pieces is not simple. Further, full development of item 1 requires a clear set of projects and completing item 3 is needed to develop that set of projects.

This memo summarizes our thinking and presents a list of items that may be needed.

1. Review and revise concurrency system

As we recommended in Transportation Conversations, "Concurrency should be simplified and should consider transit, bicycling and walking...Concurrency should principally monitor the approved land use and transportation plans and insure that they are being completed in relative balance." Concurrency should help achieve land use and transportation goals, not be an impediment to achieving the goals. With its sole focus on auto capacity at traffic signals, the current concurrency system does not help achieve the performance measures associated with a balanced transportation plan.

The Commission recommends adopting a concurrency system similar to the system in use by the City of Redmond. In this system, an agreed upon transportation project list that is fundable over the next 20 years is developed. This list does not include maintenance projects; only those projects that add capacity for any mode. Similarly, a land use plan for that same 20 year time period is identified.

Each transportation project is assigned a value for supplying capacity based on that project's percent completion of the total 20 year project list. The number of total new trips, across all modes, is based on the trips generated by the 20-year land use targets in the Comprehensive Plan.

Land Use

Plan

2032

New trips

T_n

= (2032 trips
- 2012 trips)

2032 Project List

<u>Project #</u>	<u>Cost</u>	<u>Capacity</u>	<u>Trip Capacity</u>
1	a	a/\$	(a/\$) * T_n
2	b	b/\$	(b/\$) * T_n
3	c	c/\$	(c/\$) * T_n
4	d	d/\$	(d/\$) * T_n
⋮	⋮	⋮	⋮
N	n	n/\$	(n/\$) * T_n
Sum	\$	1	T_n

The number of total new trips is assigned to be equal to the new capacity of the total project list. This translation between trips and projects means that the capacity (in trips) can be determined for a given list of projects, such as completed and funded projects on the 6-year CIP.

This allows a ledger system to be set up, with a balance of trips "available" based on the completed and funded projects. As new land development projects are considered, the trips being proposed are compared to the trips available. If more trips are available than are being proposed by the new land development project, the project passes concurrency. If a project passes concurrency, its future trips are subtracted from the balance. Trips are added to the balance when transportation projects are added to the funded CIP. This system ensures that if concurrency is to be maintained the 20-year project list is needs be implemented at a rate equal or faster than the rate of development. If fewer trips are available than what are required, the development can construct transportation improvements that add capacity.

The City of Redmond has been successfully using their system for about 2 years.

2. Develop new level of service standards that align with transportation principles

Kirkland's current vehicular level of service standard measures the auto volume to capacity ratio at signalized intersections. The primary purpose of this level of service is for use in concurrency testing. With the concurrency system proposed in 1 above, a level of service of sorts is established when the capacity of the project list for a given number of years is set equal to the number of new trips to be added to the system over the same number of years. Mode specific performance measures are needed when projects are selected for funding. These performance measures can also be tracked annually to help monitor transportation system performance.

3. Develop clear goals and prioritization systems for project categories

The Commission has explored this issue extensively in the context of developing a set of funded projects for the CIP. We looked at a framework for preparing a project list that suggests:

- Adopted Plan documents (e.g. Active Transportation Plan, ITS Plan) are based on adopted goals and performance measures.
- Projects enter into the CIP from adopted plans which contain clear prioritization methods and which can be used to develop project lists.
- As funding is available, prioritized lists of projects are completed. Level of service is used here to determine the types of projects that should receive funding.
- Evaluation of the system is based on adopted performance measures that come from the original goals. This evaluation drives new projects.

Table showing project types across a framework of project development

Project type	High level goals	Specific plan document	Prioritization methods	Funding	Evaluation
ITS	Performance measure	ITS Plan	Priorities in plan	Grant funding has been the source of ITS funding	Performance measure
Bicycle network	Performance measure	Active Transportation Plan describes a network			
Sidewalk construction		Active Transportation Plan establishes	Method in Active Transportation Plan and		

		goals	existing project selection method		
Sidewalk maintenance				Funding has been traditionally \$200k/yr	
Crosswalk upgrade				Funding has been traditionally \$35k/yr	
Pavement maintenance	Performance measure		Pavement maintenance software	Set in coordination with PCI goal	Measure PCI
Pavement markings				Funding has been traditionally \$250k/yr	
Traffic signal maintenance					
Auto network improvements	Comprehensive Plan sets traffic signal levels of service		Projects that are needed to meet concurrency		
School walk routes	Performance measure for completion			Typically grant funded	

Although a complete or practically complete system exists for some modes or aspects, for example pavement maintenance, there were several key missing pieces in the city's current methods. Importantly, we are lacking a comprehensive multimodal transportation plan that describes how all elements of the transportation system fit together under over-arching goals. Without clear, complete, integrated goals, it is difficult to develop a comprehensive set of prioritization methods. Without prioritization methods, developing projects lists can't be done in a straightforward manner. Without project lists it is difficult to determine where the City is spending limited resources and identify critical funding gaps.

Performance measures have been developed for balanced transportation and include:

MEASURE	2008	2009	2010	2011	Target
Percent of Capital Improvement Program Transportation funding devoted to Active Transportation	17.65%	28.76%	34.48%	21%	33%
Percent of proposed Intelligent Transportation Systems projects completed	*	*	4%	6%	100% of ITS Strategic Plan
Complete sidewalk construction on at least one side of all school walk routes	78.6%	*	81.1%	83%	100% by 2019
Percent of bicycle network construction improvement projects completed	*	*	50%	50%	100% by 2018
Percentage of arterials that are complete streets	*	*	58%	58%	100%
Residents surveyed are satisfied with maintenance of active transportation facilities ¹	83%	**	84%	**	90%
Automobile crashes involving bikes	12	8	17	14	0
Automobile crashes involving pedestrians	15	13	16	20	0
Percent of total trips using active transportation mode (transit, pedestrian, bicycle)	***	***	***	***	35% of trips in transit/other mode by 2022
Major arterial travel times	***	***	***	***	***

¹ Active Transportation Facilities include sidewalks, bike lanes, pedestrian flags, in-pavement lights, etc

*No data available

**Community Survey occurs in even years

***Measure being refined for future reports

****2011 data excludes needs in annexation area. Assessment of need will take place in 2012.

Given historic CIP funding, and the costs of the projects necessary to meet the measures, it is not possible to achieve all the measures simultaneously. Another purpose of a Transportation Plan would be to coordinate transportation goals, funding and project timing across modes.

An update of the City's Comprehensive Plan is scheduled to begin in 2013. A Transportation Master Plan could potentially be the Transportation Element of the revised Comprehensive Plan. The Comprehensive Plan update would also require an updating of the City's land use and transportation network.

Recommendation

The Commission recommends:

Council further review and comment on the proposed concurrency system. Developing a complete Concurrency System requires a clear future land use plan and a companion list of transportation projects. The City's Comprehensive Plan update requires a revised land use plan and so will give the opportunity to supply the needed land use information.

Funding for a transportation master plan be considered in the 2013-2014 budget process. A transportation master plan will allow missing gaps in project development system to be filled. Therefore such a plan would be an ideal opportunity to establish a transportation plan that reflects the needs of the new neighborhoods.